



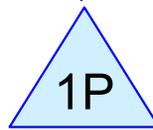
predevelopment



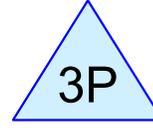
North Side



South Side



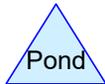
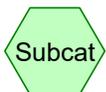
Detention Pond



Dry well



summation



22493 SW Added Dry Well-RT_2

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
990	65	Brush, Good, HSG C (PR1, PR2)
3,010	98	Paved roads w/curbs & sewers, HSG D (PR1, PR2)
4,000	72	Woods/grass comb., Good, HSG C (EX)
8,000	81	TOTAL AREA

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Type III 24-hr 2-year Rainfall=3.10"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX: predevelopment Runoff Area=4,000 sf 0.00% Impervious Runoff Depth>0.87"
Flow Length=100' Slope=0.0100 '/' Tc=8.7 min CN=72 Runoff=0.08 cfs 289 cf

Subcatchment PR1: North Side Runoff Area=2,000 sf 66.50% Impervious Runoff Depth>1.83"
Tc=5.0 min CN=87 Runoff=0.10 cfs 304 cf

Subcatchment PR2: South Side Runoff Area=2,000 sf 84.00% Impervious Runoff Depth>2.35"
Tc=5.0 min CN=93 Runoff=0.13 cfs 391 cf

Reach 6R: summation Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Pond 1P: Detention Pond Peak Elev=42.55' Storage=370 cf Inflow=0.23 cfs 561 cf
Discarded=0.01 cfs 330 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 330 cf

Pond 3P: Dry well Peak Elev=41.34' Storage=43 cf Inflow=0.13 cfs 391 cf
Discarded=0.00 cfs 99 cf Primary=0.12 cfs 257 cf Outflow=0.13 cfs 356 cf

Total Runoff Area = 8,000 sf Runoff Volume = 984 cf Average Runoff Depth = 1.48"
62.38% Pervious = 4,990 sf 37.62% Impervious = 3,010 sf

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Type III 24-hr 2-year Rainfall=3.10"

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Summary for Subcatchment EX: predevelopment

Runoff = 0.08 cfs @ 12.13 hrs, Volume= 289 cf, Depth> 0.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
4,000	72	Woods/grass comb., Good, HSG C
4,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	20	0.0100	0.04		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
0.8	80	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
8.7	100	Total			

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Type III 24-hr 2-year Rainfall=3.10"

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Summary for Subcatchment PR1: North Side

Runoff = 0.10 cfs @ 12.07 hrs, Volume= 304 cf, Depth> 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,330	98	Paved roads w/curbs & sewers, HSG D
670	65	Brush, Good, HSG C
2,000	87	Weighted Average
670		33.50% Pervious Area
1,330		66.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

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Type III 24-hr 2-year Rainfall=3.10"

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Summary for Subcatchment PR2: South Side

Runoff = 0.13 cfs @ 12.07 hrs, Volume= 391 cf, Depth> 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
1,680	98	Paved roads w/curbs & sewers, HSG D
320	65	Brush, Good, HSG C
2,000	93	Weighted Average
320		16.00% Pervious Area
1,680		84.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

Summary for Reach 6R: summation

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth = 0.00" for 2-year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth > 1.68" for 2-year event
 Inflow = 0.23 cfs @ 12.07 hrs, Volume= 561 cf
 Outflow = 0.01 cfs @ 15.25 hrs, Volume= 330 cf, Atten= 97%, Lag= 190.3 min
 Discarded = 0.01 cfs @ 15.25 hrs, Volume= 330 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 42.55' @ 15.25 hrs Surf.Area= 319 sf Storage= 370 cf

Plug-Flow detention time= 320.9 min calculated for 330 cf (59% of inflow)
 Center-of-Mass det. time= 242.7 min (1,035.7 - 793.0)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	575 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.00	160	0	0
42.95	360	507	507
43.00	420	19	526
43.05	1,500	48	575

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	1.000 in/hr Exfiltration over Surface area
#2	Primary	43.04'	6.0' long x 5.0' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00			
2.50 3.00 3.50 4.00 4.50 5.00 5.50			
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65			
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88			

Discarded OutFlow Max=0.01 cfs @ 15.25 hrs HW=42.55' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

22493 SW Added Dry Well-RT_2

Type III 24-hr 2-year Rainfall=3.10"

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Summary for Pond 3P: Dry well

Inflow Area = 2,000 sf, 84.00% Impervious, Inflow Depth > 2.35" for 2-year event
 Inflow = 0.13 cfs @ 12.07 hrs, Volume= 391 cf
 Outflow = 0.13 cfs @ 12.08 hrs, Volume= 356 cf, Atten= 0%, Lag= 0.2 min
 Discarded = 0.00 cfs @ 12.08 hrs, Volume= 99 cf
 Primary = 0.12 cfs @ 12.08 hrs, Volume= 257 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 41.34' @ 12.08 hrs Surf.Area= 24 sf Storage= 43 cf

Plug-Flow detention time= 73.1 min calculated for 356 cf (91% of inflow)
 Center-of-Mass det. time= 28.0 min (820.3 - 792.3)

Volume	Invert	Avail.Storage	Storage Description
#1	38.00'	23 cf	5.50'D x 4.00'H Vertical Cone/Cylinder 95 cf Overall - 38 cf Embedded = 57 cf x 40.0% Voids
#2	39.00'	29 cf	3.50'D x 3.00'H Vertical Cone/Cylinder Inside #1 38 cf Overall - 3.0" Wall Thickness = 29 cf
		52 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	38.00'	1.000 in/hr Exfiltration over Wetted area Phase-In= 0.10'
#2	Primary	41.13'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.00 cfs @ 12.08 hrs HW=41.34' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.12 cfs @ 12.08 hrs HW=41.34' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.12 cfs @ 1.57 fps)

22493 SW Added Dry Well-RT_2

Type III 24-hr 10-year Rainfall=4.55"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX: predevelopment Runoff Area=4,000 sf 0.00% Impervious Runoff Depth>1.85"
Flow Length=100' Slope=0.0100 '/' Tc=8.7 min CN=72 Runoff=0.18 cfs 618 cf

Subcatchment PR1: North Side Runoff Area=2,000 sf 66.50% Impervious Runoff Depth>3.14"
Tc=5.0 min CN=87 Runoff=0.17 cfs 524 cf

Subcatchment PR2: South Side Runoff Area=2,000 sf 84.00% Impervious Runoff Depth>3.75"
Tc=5.0 min CN=93 Runoff=0.20 cfs 626 cf

Reach 6R: summation Inflow=0.01 cfs 12 cf
Outflow=0.01 cfs 12 cf

Pond 1P: Detention Pond Peak Elev=43.05' Storage=568 cf Inflow=0.37 cfs 1,000 cf
Discarded=0.03 cfs 586 cf Primary=0.01 cfs 12 cf Outflow=0.04 cfs 598 cf

Pond 3P: Dry well Peak Elev=41.40' Storage=43 cf Inflow=0.20 cfs 626 cf
Discarded=0.00 cfs 110 cf Primary=0.20 cfs 476 cf Outflow=0.20 cfs 586 cf

Total Runoff Area = 8,000 sf Runoff Volume = 1,767 cf Average Runoff Depth = 2.65"
62.38% Pervious = 4,990 sf 37.62% Impervious = 3,010 sf

Summary for Subcatchment EX: predevelopment

Runoff = 0.18 cfs @ 12.13 hrs, Volume= 618 cf, Depth> 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-year Rainfall=4.55"

Area (sf)	CN	Description
4,000	72	Woods/grass comb., Good, HSG C
4,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	20	0.0100	0.04		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
0.8	80	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
8.7	100	Total			

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Type III 24-hr 10-year Rainfall=4.55"

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Summary for Subcatchment PR1: North Side

Runoff = 0.17 cfs @ 12.07 hrs, Volume= 524 cf, Depth> 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.55"

Area (sf)	CN	Description
1,330	98	Paved roads w/curbs & sewers, HSG D
670	65	Brush, Good, HSG C
2,000	87	Weighted Average
670		33.50% Pervious Area
1,330		66.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

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Type III 24-hr 10-year Rainfall=4.55"

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Summary for Subcatchment PR2: South Side

Runoff = 0.20 cfs @ 12.07 hrs, Volume= 626 cf, Depth> 3.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.55"

Area (sf)	CN	Description
1,680	98	Paved roads w/curbs & sewers, HSG D
320	65	Brush, Good, HSG C
2,000	93	Weighted Average
320		16.00% Pervious Area
1,680		84.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

Summary for Reach 6R: summation

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth = 0.04" for 10-year event
Inflow = 0.01 cfs @ 12.70 hrs, Volume= 12 cf
Outflow = 0.01 cfs @ 12.70 hrs, Volume= 12 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth > 3.00" for 10-year event
 Inflow = 0.37 cfs @ 12.07 hrs, Volume= 1,000 cf
 Outflow = 0.04 cfs @ 12.70 hrs, Volume= 598 cf, Atten= 89%, Lag= 37.9 min
 Discarded = 0.03 cfs @ 12.70 hrs, Volume= 586 cf
 Primary = 0.01 cfs @ 12.70 hrs, Volume= 12 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 43.05' @ 12.70 hrs Surf.Area= 1,403 sf Storage= 568 cf

Plug-Flow detention time= 249.8 min calculated for 598 cf (60% of inflow)
 Center-of-Mass det. time= 167.1 min (953.9 - 786.8)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	575 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.00	160	0	0
42.95	360	507	507
43.00	420	19	526
43.05	1,500	48	575

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	1.000 in/hr Exfiltration over Surface area
#2	Primary	43.04'	6.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.03 cfs @ 12.70 hrs HW=43.05' (Free Discharge)
 ↑1=**Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.01 cfs @ 12.70 hrs HW=43.05' (Free Discharge)
 ↑2=**Broad-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.17 fps)

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Type III 24-hr 10-year Rainfall=4.55"

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Summary for Pond 3P: Dry well

Inflow Area = 2,000 sf, 84.00% Impervious, Inflow Depth > 3.75" for 10-year event
 Inflow = 0.20 cfs @ 12.07 hrs, Volume= 626 cf
 Outflow = 0.20 cfs @ 12.07 hrs, Volume= 586 cf, Atten= 0%, Lag= 0.2 min
 Discarded = 0.00 cfs @ 12.07 hrs, Volume= 110 cf
 Primary = 0.20 cfs @ 12.07 hrs, Volume= 476 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 41.40' @ 12.07 hrs Surf.Area= 24 sf Storage= 43 cf

Plug-Flow detention time= 52.6 min calculated for 586 cf (94% of inflow)
 Center-of-Mass det. time= 18.5 min (798.3 - 779.7)

Volume	Invert	Avail.Storage	Storage Description
#1	38.00'	23 cf	5.50'D x 4.00'H Vertical Cone/Cylinder 95 cf Overall - 38 cf Embedded = 57 cf x 40.0% Voids
#2	39.00'	29 cf	3.50'D x 3.00'H Vertical Cone/Cylinder Inside #1 38 cf Overall - 3.0" Wall Thickness = 29 cf
		52 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	38.00'	1.000 in/hr Exfiltration over Wetted area Phase-In= 0.10'
#2	Primary	41.13'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.00 cfs @ 12.07 hrs HW=41.40' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.20 cfs @ 12.07 hrs HW=41.40' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.20 cfs @ 1.78 fps)

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Type III 24-hr 25-year Rainfall=5.40"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX: predevelopment Runoff Area=4,000 sf 0.00% Impervious Runoff Depth>2.51"
Flow Length=100' Slope=0.0100 '/' Tc=8.7 min CN=72 Runoff=0.24 cfs 835 cf

Subcatchment PR1: North Side Runoff Area=2,000 sf 66.50% Impervious Runoff Depth>3.94"
Tc=5.0 min CN=87 Runoff=0.22 cfs 657 cf

Subcatchment PR2: South Side Runoff Area=2,000 sf 84.00% Impervious Runoff Depth>4.59"
Tc=5.0 min CN=93 Runoff=0.24 cfs 765 cf

Reach 6R: summation Inflow=0.17 cfs 127 cf
Outflow=0.17 cfs 127 cf

Pond 1P: Detention Pond Peak Elev=43.09' Storage=575 cf Inflow=0.45 cfs 1,268 cf
Discarded=0.03 cfs 676 cf Primary=0.17 cfs 127 cf Outflow=0.21 cfs 803 cf

Pond 3P: Dry well Peak Elev=41.44' Storage=44 cf Inflow=0.24 cfs 765 cf
Discarded=0.00 cfs 114 cf Primary=0.24 cfs 611 cf Outflow=0.24 cfs 725 cf

Total Runoff Area = 8,000 sf Runoff Volume = 2,257 cf Average Runoff Depth = 3.39"
62.38% Pervious = 4,990 sf 37.62% Impervious = 3,010 sf

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Type III 24-hr 25-year Rainfall=5.40"

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Summary for Subcatchment EX: predevelopment

Runoff = 0.24 cfs @ 12.13 hrs, Volume= 835 cf, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.40"

Area (sf)	CN	Description
4,000	72	Woods/grass comb., Good, HSG C
4,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	20	0.0100	0.04		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
0.8	80	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
8.7	100	Total			

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Type III 24-hr 25-year Rainfall=5.40"

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Summary for Subcatchment PR1: North Side

Runoff = 0.22 cfs @ 12.07 hrs, Volume= 657 cf, Depth> 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.40"

Area (sf)	CN	Description
1,330	98	Paved roads w/curbs & sewers, HSG D
670	65	Brush, Good, HSG C
2,000	87	Weighted Average
670		33.50% Pervious Area
1,330		66.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

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Type III 24-hr 25-year Rainfall=5.40"

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Summary for Subcatchment PR2: South Side

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 765 cf, Depth> 4.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.40"

Area (sf)	CN	Description
1,680	98	Paved roads w/curbs & sewers, HSG D
320	65	Brush, Good, HSG C
2,000	93	Weighted Average
320		16.00% Pervious Area
1,680		84.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

Summary for Reach 6R: summation

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth = 0.38" for 25-year event
Inflow = 0.17 cfs @ 12.21 hrs, Volume= 127 cf
Outflow = 0.17 cfs @ 12.21 hrs, Volume= 127 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth > 3.80" for 25-year event
 Inflow = 0.45 cfs @ 12.07 hrs, Volume= 1,268 cf
 Outflow = 0.21 cfs @ 12.21 hrs, Volume= 803 cf, Atten= 54%, Lag= 8.5 min
 Discarded = 0.03 cfs @ 12.21 hrs, Volume= 676 cf
 Primary = 0.17 cfs @ 12.21 hrs, Volume= 127 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 43.09' @ 12.21 hrs Surf.Area= 1,500 sf Storage= 575 cf

Plug-Flow detention time= 206.5 min calculated for 803 cf (63% of inflow)
 Center-of-Mass det. time= 123.6 min (907.6 - 784.0)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	575 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.00	160	0	0
42.95	360	507	507
43.00	420	19	526
43.05	1,500	48	575

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	1.000 in/hr Exfiltration over Surface area
#2	Primary	43.04'	6.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.03 cfs @ 12.21 hrs HW=43.09' (Free Discharge)
 ↑1=**Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.15 cfs @ 12.21 hrs HW=43.09' (Free Discharge)
 ↑2=**Broad-Crested Rectangular Weir** (Weir Controls 0.15 cfs @ 0.52 fps)

22493 SW Added Dry Well-RT_2

Type III 24-hr 25-year Rainfall=5.40"

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Summary for Pond 3P: Dry well

Inflow Area = 2,000 sf, 84.00% Impervious, Inflow Depth > 4.59" for 25-year event
 Inflow = 0.24 cfs @ 12.07 hrs, Volume= 765 cf
 Outflow = 0.24 cfs @ 12.07 hrs, Volume= 725 cf, Atten= 0%, Lag= 0.2 min
 Discarded = 0.00 cfs @ 12.07 hrs, Volume= 114 cf
 Primary = 0.24 cfs @ 12.07 hrs, Volume= 611 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 41.44' @ 12.07 hrs Surf.Area= 24 sf Storage= 44 cf

Plug-Flow detention time= 46.2 min calculated for 725 cf (95% of inflow)
 Center-of-Mass det. time= 17.1 min (791.7 - 774.6)

Volume	Invert	Avail.Storage	Storage Description
#1	38.00'	23 cf	5.50'D x 4.00'H Vertical Cone/Cylinder 95 cf Overall - 38 cf Embedded = 57 cf x 40.0% Voids
#2	39.00'	29 cf	3.50'D x 3.00'H Vertical Cone/Cylinder Inside #1 38 cf Overall - 3.0" Wall Thickness = 29 cf
		52 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	38.00'	1.000 in/hr Exfiltration over Wetted area Phase-In= 0.10'
#2	Primary	41.13'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.00 cfs @ 12.07 hrs HW=41.44' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.24 cfs @ 12.07 hrs HW=41.44' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.24 cfs @ 1.88 fps)

22493 SW Added Dry Well-RT_2

Type III 24-hr 100-year Rainfall=6.50"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX: predevelopment Runoff Area=4,000 sf 0.00% Impervious Runoff Depth>3.40"
Flow Length=100' Slope=0.0100 '/' Tc=8.7 min CN=72 Runoff=0.33 cfs 1,134 cf

Subcatchment PR1: North Side Runoff Area=2,000 sf 66.50% Impervious Runoff Depth>4.99"
Tc=5.0 min CN=87 Runoff=0.27 cfs 832 cf

Subcatchment PR2: South Side Runoff Area=2,000 sf 84.00% Impervious Runoff Depth>5.67"
Tc=5.0 min CN=93 Runoff=0.29 cfs 945 cf

Reach 6R: summation Inflow=0.71 cfs 660 cf
Outflow=0.71 cfs 660 cf

Pond 1P: Detention Pond Peak Elev=43.18' Storage=575 cf Inflow=0.56 cfs 1,619 cf
Discarded=0.03 cfs 759 cf Primary=0.71 cfs 660 cf Outflow=0.75 cfs 1,419 cf

Pond 3P: Dry well Peak Elev=41.48' Storage=44 cf Inflow=0.29 cfs 945 cf
Discarded=0.00 cfs 119 cf Primary=0.29 cfs 786 cf Outflow=0.29 cfs 906 cf

Total Runoff Area = 8,000 sf Runoff Volume = 2,911 cf Average Runoff Depth = 4.37"
62.38% Pervious = 4,990 sf 37.62% Impervious = 3,010 sf

Summary for Subcatchment EX: predevelopment

Runoff = 0.33 cfs @ 12.13 hrs, Volume= 1,134 cf, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-year Rainfall=6.50"

Area (sf)	CN	Description
4,000	72	Woods/grass comb., Good, HSG C
4,000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	20	0.0100	0.04		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
0.8	80	0.0100	1.61		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
8.7	100	Total			

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Type III 24-hr 100-year Rainfall=6.50"

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Summary for Subcatchment PR1: North Side

Runoff = 0.27 cfs @ 12.07 hrs, Volume= 832 cf, Depth> 4.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.50"

Area (sf)	CN	Description
1,330	98	Paved roads w/curbs & sewers, HSG D
670	65	Brush, Good, HSG C
2,000	87	Weighted Average
670		33.50% Pervious Area
1,330		66.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

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Type III 24-hr 100-year Rainfall=6.50"

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Summary for Subcatchment PR2: South Side

Runoff = 0.29 cfs @ 12.07 hrs, Volume= 945 cf, Depth> 5.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-year Rainfall=6.50"

Area (sf)	CN	Description
1,680	98	Paved roads w/curbs & sewers, HSG D
320	65	Brush, Good, HSG C
2,000	93	Weighted Average
320		16.00% Pervious Area
1,680		84.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Calc'd Tc < 5min

Summary for Reach 6R: summation

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth = 1.98" for 100-year event
Inflow = 0.71 cfs @ 12.08 hrs, Volume= 660 cf
Outflow = 0.71 cfs @ 12.08 hrs, Volume= 660 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: Detention Pond

Inflow Area = 4,000 sf, 75.25% Impervious, Inflow Depth > 4.86" for 100-year event
 Inflow = 0.56 cfs @ 12.07 hrs, Volume= 1,619 cf
 Outflow = 0.75 cfs @ 12.08 hrs, Volume= 1,419 cf, Atten= 0%, Lag= 0.4 min
 Discarded = 0.03 cfs @ 12.08 hrs, Volume= 759 cf
 Primary = 0.71 cfs @ 12.08 hrs, Volume= 660 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 43.18' @ 12.08 hrs Surf.Area= 1,500 sf Storage= 575 cf

Plug-Flow detention time= 109.8 min calculated for 1,419 cf (88% of inflow)
 Center-of-Mass det. time= 59.3 min (839.7 - 780.4)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	575 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.00	160	0	0
42.95	360	507	507
43.00	420	19	526
43.05	1,500	48	575

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	1.000 in/hr Exfiltration over Surface area
#2	Primary	43.04'	6.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.03 cfs @ 12.08 hrs HW=43.18' (Free Discharge)
 ↑1=**Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.71 cfs @ 12.08 hrs HW=43.18' (Free Discharge)
 ↑2=**Broad-Crested Rectangular Weir** (Weir Controls 0.71 cfs @ 0.87 fps)

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Type III 24-hr 100-year Rainfall=6.50"

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Summary for Pond 3P: Dry well

Inflow Area = 2,000 sf, 84.00% Impervious, Inflow Depth > 5.67" for 100-year event
 Inflow = 0.29 cfs @ 12.07 hrs, Volume= 945 cf
 Outflow = 0.29 cfs @ 12.07 hrs, Volume= 906 cf, Atten= 0%, Lag= 0.2 min
 Discarded = 0.00 cfs @ 12.07 hrs, Volume= 119 cf
 Primary = 0.29 cfs @ 12.07 hrs, Volume= 786 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 41.48' @ 12.07 hrs Surf.Area= 24 sf Storage= 44 cf

Plug-Flow detention time= 40.1 min calculated for 906 cf (96% of inflow)
 Center-of-Mass det. time= 15.7 min (785.0 - 769.4)

Volume	Invert	Avail.Storage	Storage Description
#1	38.00'	23 cf	5.50'D x 4.00'H Vertical Cone/Cylinder 95 cf Overall - 38 cf Embedded = 57 cf x 40.0% Voids
#2	39.00'	29 cf	3.50'D x 3.00'H Vertical Cone/Cylinder Inside #1 38 cf Overall - 3.0" Wall Thickness = 29 cf
		52 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	38.00'	1.000 in/hr Exfiltration over Wetted area Phase-In= 0.10'
#2	Primary	41.13'	6.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=0.00 cfs @ 12.07 hrs HW=41.48' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.29 cfs @ 12.07 hrs HW=41.48' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.29 cfs @ 2.00 fps)